COMMONWEALTH OF VIRGINIA
Department of Environmental Quality
Piedmont Regional Office

STATEMENT OF LEGAL AND FACTUAL BASIS

DuPont Teijin Films
5401 Jefferson Davis Highway; Chesterfield County, Virginia
Permit No. PRO51924

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, DuPont Teijin Films has applied for a Title V Operating Permit for its film coating facility. The Department has reviewed the application and has prepared a draft Title V Operating Permit.

Engineer/Permit Contact:_____ Date:_____

Air Permit Manager:_____ Date:_____

FACILITY INFORMATION

Permittee/ Facility
DuPont Teijin Films
P.O. Box 27222
Richmond, Virginia 23261

AIRS ID No. 51-041-0418

SOURCE DESCRIPTION

SIC Code: 3999 – Coated film, Polyester Film

DuPont Teijin Films coats plastic film with a variety of coatings. The coating process involves affixing a thin, uniform coating to the surface of the film. The process is organized in the following areas: solution prep, coating and drying, and solvent recovery.

This facility was previously considered to be part of the larger DuPont Spruance Plant (Registration #50397), but when the film portion of the facility was sold to DuPont Teijin Films, VA DEQ determined that the film facility was no longer under common control with the rest of the Spruance Plant. Therefore, VA DEQ issued the film facility its own registration number (51917) and now considers the film facility to constitute its own stationary source.

The facility is a Title V major source of more than 10 tons/yr of a single federal HAP, toluene, and more than 100 tons/yr of VOC. This source is located in an attainment area for all pollutants. The facility was previously permitted under a Minor NSR Permit issued on February 13, 2001.

COMPLIANCE STATUS

There are no known compliance issues with this facility, either in its past operation as part of the DuPont Spruance Plant or in its current DuPont Teijin Films incarnation.

There have been no inspections of the facility since it was deemed to be its own stationary source, however, the film operation was inspected numerous times as part of the larger DuPont Spruance Plant. The latest of these was September 29, 2000, and the facility was found to be in compliance.

Note: this facility was known as the Mylar ("Mylar" being the trade name of the film produced) plant when operated as part of the DuPont Spruance Plant. Now that the facility is owned by DuPont Teijin Films, they have request that references to "Mylar" be replaced with the generic term "film" since the coated film now produced may be sold under different trade names.

EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

A. The emissions units at this facility consist of the following :

Emission Unit No.	Stack No.	Emission Unit Description	Size/Rated Capacity
MYE01	MYS09-12	Z Side Weigh Tanks	3.6 tons/hr coating solution
MYE02-03	MYS09-12	Two (2) Z Side Dissolvers	3.6 tons/hr coating solution
MYE04-05	MYS09-12	Two (2) Z Side Mixer/Blenders	3.6 tons/hr coating solution
MYE06-09	MYS09-12 MYS01-08	Four (4) Mix Tanks	3.6 tons/hr coating solution
MYE10-11	MYS09-12	Two (2) Dissolver Tanks	3.6 tons/hr coating solution
MYE12-19	MYS09-12	Eight (8) Blenders/Hold Tanks	3.6 tons/hr coating solution
MYE20-23	MYS01-08 MYS23-24	Four (4) Vertical Coating Drying Lines	0.5856 tons/hr coated film each
MYE24	MYS01-08 MYS15	One (1) Three-Station Horizontal Coating / Drying Line	1.636 tons/hr coated film
MYE25	MYS01-08 MYS16-18	Small Lot Tanks	3.3 tons/hr coated film
MYE 26	MYS19	Solvent Recovery Building	1.5 tons/hr solvent
MYE27	MYS20	Tank Truck Loading Station	150 gpm pump
MYT01	Fugitive	One (1) Toluene Storage Tank	11,500 gallons
MYT02-03	Fugitive	Two (2) THF Storage Tanks	11,500 gallons each
MYT04	Fugitive	One (1) Crude Toluene Storage Tank	4,700 gallons
MYT06	Fugitive	Miscellaneous Storage Tanks	20 small tanks with a total capacity of 18,585 gallons
MYT07	Fugitive	One (1) Toluene	13,000 gallons

		Storage Tank	
MYT08	MYS01-08	One (1) THF Storage Tank	16,500 gallons

B. Control Equipment

- Carbon adsorption based solvent recovery system (MYC-01) to recapture the toluene and THF solvent used in the film coating process, collection and control estimated at 99%.

EMISSIONS INVENTORY

An emission update was received for the year 2000 (at that time, as part of the DuPont Spruance facility). The actual annual VOC emissions from the film plant were 48.1 tons, 23 tons of which were also HAPs (toluene).

APPLICABLE REQUIREMENTS – Film Coating

There are two sources of specific applicable requirements for the film coating operation: The 5/30/96 VOC RACT Consent Agreement and the 2/13/2001 minor NSR permit. Because of the structure of these two documents, except for where noted, the facility's specific applicable requirements apply to the film coating process as whole, as opposed to any specific unit within the operation.

1996 RACT Consent Agreement

E.3. All solvent-spun synthetic fiber processes at each plant shall demonstrate compliance with the VOC control efficiencies as specified in the Agreement by a monthly material balance averaged with the preceding five months. The VOC control efficiencies shall be calculated each month form the VOC emissions determined in the Performance Test and Compliance Provisions section of 40 CFR 60, Subpart HHH (Standards of Performance for Synthetic Fiber Production Facilities 60.600-60.604). The VOC control efficiencies shall be calculated suing the following equation:

EFF = (1 – (E/1000)) x 100; where

EFF = VOC control efficiency, and
E = Emissions in pounds per 1,000 pounds of solvent feed

E.4. DuPont shall submit a written report to the Regional Director of the results of the first 6-month average VOC control efficiency demonstration. DuPont shall also submit the results of the subsequent demonstrations in which the 6-month average VOC control efficiency in any plant as specified in this

Agreement is not demonstrated. These reports shall be submitted at the end of each calendar quarter after the initial demonstration, however, if DuPont is successful in demonstrating compliance with the VOC control efficiency in each plant during a particular quarter, a report stating this shall be submitted to the Regional Director semiannually.

E.13. Film plant VOC emissions shall be controlled by carbon bed adsorbers. The carbon adsorption system shall be equipped with a device which measure the VOC concentration of the exhaust gas and an exhaust gas flow meter. The instruments shall be calibrated as recommended by the manufacturer for the service in which they are installed. The carbon bed outlet VOC concentration shall not exceed 50 ppm before triggering a switch to a fresh bed.

E.14. DuPont shall maintain records of the manufacturer's recommendations for carbon bed replacement and records of actual carbon bed replacement.

E.15. The VOC control efficiency of the film plant processes shall be a minimum of 98.3% on a six-month rolling average basis. This efficiency shall be verified by mass balance methods described or referenced in Condition E.3. of this Agreement.

2001 Minor NSR Permit

3. **Emission Controls** - Volatile organic compound (VOC) emissions from the THF storage tank shall be controlled by the use of a submerged fill pipe and a four-bed carbon adsorption recovery system. The carbon adsorption system shall achieve at least a 95% control efficiency for VOC emissions, calculated as a monthly average, from the THF storage tank as determined by a material balance calculation method similar to that specified in Condition 9.a. The submerged fill pipe system and the carbon adsorption system shall be provided with adequate access for inspection and shall be in operation when the THF storage tank is being filled.
(9 VAC 5-50-260 and 9 VAC 5-40-3440)

4. **Emission Controls** - Volatile organic compound (VOC) emissions from the vertical tower "G" coater shall be controlled by a four-bed carbon adsorption recovery system. The four-bed carbon adsorption recovery system shall be provided with adequate access for inspection and shall be in operation when the vertical tower "G" coater is operating.
(9 VAC 5-50-260)

5. **Emission Controls** - Volatile organic compound (VOC) emissions from the multi-station coater shall be controlled by a four-bed carbon absorption recovery system. The four-bed carbon adsorption recovery system shall be provided with adequate access for inspection and shall be in operation when the multi-station coater is operating.
(9 VAC 5-80-10 H and 9 VAC 5-50-260)

6. **Monitoring Devices** - Each of the carbon adsorption systems shall be equipped with a device which continuously measures the VOC concentration of the exhaust gas and which triggers the carbon bed regeneration cycle. Each monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the respective carbon adsorption system is operating.
(9 VAC 5-80-10 H, 9 VAC 5-50-20 C and 9 VAC 5-50-260)

7. **Production** - The production of coated film shall not exceed 28,290 tons per year, calculated monthly as the sum of coated film production over the previous consecutive 12 months.
(9 VAC 5-80-10 H)

8. **Emission Limits** - Emissions from the operation of the film coating plant shall not exceed the limits specified below:

Volatile Organic Compounds	36.5 lbs/hr	159.3 tons/yr

Compliance with these emission limits shall be demonstrated by record keeping in accordance with Condition 9 (b and d).
(9 VAC 5-50-260)

9. **On Site Records** - The permittee shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit. The content of and format of such records shall be arranged with the Director, Piedmont Region. These records shall include, but are not limited to:

   a. Monthly VOC emissions (tons) from the film coating plant, calculated by a material balance similar to the method prescribed in 40 CFR §60.603 and approved by the Director, Piedmont Region. The material balance shall include terms for monthly beginning and ending VOC inventory and amounts of VOC removed from the system as nongaseous losses.

   b. Annual VOC emissions (tons per year) from the film coating plant, calculated monthly as the sum of monthly VOC emissions over the previous consecutive 12 months.

   c. The number of hours during the calendar month that the film coating plant was operating. The number of hours that the film coating plant is operating during the calendar month shall be determined as the sum of plant operating hours in which any film coater within the plant was operated.

d. Average hourly VOC emissions from the film coating plant, calculated monthly by dividing the annual VOC emissions over the previous consecutive 12 months by the sum of the number of hours that the film coating plant was operating during the previous consecutive 12 months.

e. The monthly production of coated film, and the annual production of coated film calculated monthly as the sum of coated film production over the previous consecutive 12 months.

f. Maintenance and calibration records (calibrations, checks, and adjustments) for the VOC emission monitoring device.

g. Records of the manufacturer's recommendations for carbon bed replacement, and records of actual carbon bed replacement.

h. Training records required by this permit.

i. Records showing the dimensions of the THF storage tank and an analysis showing the capacity of the THF storage tank.

These records shall be available for inspection by the DEQ and shall be current for the most recent two years.
(9 VAC 5-50-50 and 40 CFR 60.116b)

10. **Stack Tests** - The permittee shall conduct monthly performance tests by material balance for VOC emissions from the film coating plant to demonstrate compliance with the emission limits contained in this permit. Compliance with the annual VOC emission limit shall be determined monthly from records required by Condition 9b. Compliance with the hourly VOC limits shall be determined monthly from records required by Condition 9d.
(9 VAC 5-50-30 G)

11. **Compliance Reports** - The permittee shall submit a written report to the Director, Piedmont Region of the results of continuing compliance determinations that indicate that VOC emissions exceed the emission limits in Condition 8. These reports shall be submitted quarterly at three-month intervals. If no exceedances occur during a particular quarter, a report stating this shall be submitted semiannually.
(9 VAC 5-50-360)

GENERALLY APPLICABLE STANDARD REQUIREMENTS

New and Modified Source Opacity Standard - Unless specified otherwise in this part, on or after the date on which the performance test required to be conducted by 9 VAC 5-50-30 is completed, no owner or other person shall cause or permit to be discharged into the atmosphere from any affected

facility any visible emissions which exhibit greater that 20% opacity, except for one six-minute period in any one hour of not more than 30% opacity. Failure to meet the requirements of this section because of the presence of water vapor shall not be a violation of this section. (9 VAC 5-50-80)

Testing - The permitted facility shall be constructed so as to allow for emissions testing at any time using appropriate methods. Upon request from the Department, test ports shall be provided at the appropriate locations. EPA Test Method 9 should be used for the Visible Emission testing for the facility and EPA Test Method 18 should be used for VOC/HAP.
(9 VAC 5-50-30 and 9 VAC 5-80-110)

Additionally, certain conditions within existing NSR permits may be applicable to all newly constructed or modified equipment that receive a permit. Below is a listing of these conditions from the 2000 NSR permit:

> Condition #21
> **Maintenance/Operating Procedures -** The permittee shall take the following measures in order to minimize the duration and frequency of excess emissions, with respect to air pollution control equipment, monitoring devices, and process equipment which affect such emissions:
>
> a. Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance.
>
> b. Maintain an inventory of spare parts
>
> c. Have available written operating procedures for equipment. These procedures shall be based on the manufacturer's recommendations, at a minimum.
>
> d. Train operators in the proper operation of all such equipment and familiarize the operators with the written operating procedures. The permittee shall maintain records of the training provided, including the names of trainees, the date of training, and the nature of the training.
>
> Records of maintenance and training shall be maintained on site for a period of five years and shall be made available to DEQ personnel upon request.
> (9 VAC 5-50-20 E)

This condition is being retained in the Title V permit because it is an applicable requirement generally applied to all modified and newly constructed equipment permitted through the minor NSR permit program.

FUTURE APPLICABLE REQUIREMENTS

No Future Applicable Requirements have been identified for this facility.

INAPPLICABLE REQUIREMENTS

NSPS Subpart VVV (which sets performance standards for the polymeric coating of substrates) is not applicable to this facility since the NSPS specifically exempts facilities which coat plastics, such as this one.

OBSOLETE REQUIREMENTS

Certain conditions of the 2001 NSR permit for the source are obsolete, no longer serve any meaningful purpose, and are unnecessary for Title V considerations.

Condition 22 from the 2001 permit is being left out of the Title V permit because the condition defines the causes for modification or revocation of an NSR permit which can be considered extraneous to the Title V permit. The assumption underlying this determination is that if an NSR permit is revoked or modified through unsolicited action by DEQ, the Title V permit will be changed in a separate and independent action from the NSR change. The Title V permit will change to reflect the changes in applicable requirements brought about by the NSR change.

Condition 17 of the 2001 permit is not being included as an applicable requirement in the Title V permit because it is out-dated. The Part 70 regulations define specific inspection and entry requirements consistent with the issuance of a TITLE V permit. These requirements are described in Condition Q in the General Permit Condition Section of the Title V permit and are at least as stringent as the NSR requirements. Inclusion of this condition would be redundant and the requirements have been overtaken by the Title V (Part 70) regulations.

Condition 19 of the 2001 permit is not being included as an applicable requirement in the Title V permit because it is included in the Condition F in the General Permit Condition Section of the Title V permit and is included as part of the malfunction reporting requirements for the overall permit. Including this condition a separate enforceable condition on the permitted equipment in addition to the entire listing of equipment covered by the TITLE V permit creates a situation where conditions are both redundant and confusing.

Condition 23 of the 2001 permit is not being included as an applicable requirement in the Title V permit because it is redundant. Condition I in the General Permit Condition Section of the Title V permit describes the requirements for transfer of ownership relative to the Title V permit. The transfer of ownership requirements for the NSR permit are therefore inappropriate for inclusion in the Title V permit.

In a similar manner, conditions #1, #2, #18, #20, #24 and #25 all contain general requirements relative to the New Source Review program which are inapplicable or redundant to the Title V permitting

program. Furthermore, condition #10 of the 2001 permit is made redundant by the "Testing" condition of the "Generally Applicable Standard Requirements" section of the Title V permit. These conditions will therefore not be included in the Title V permit.

STREAMLINED REQUIREMENTS

No streamlined requirements were identified.

GENERAL TERMS AND CONDITIONS

The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-110, that apply to all Federal operating permit sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions, including those caused by upsets, within one business day. These conditions include:

A. Federal Enforceability
B. Permit Expiration
C. Recordkeeping and Reporting
D. Annual Compliance Certification
E. Permit Deviation Reporting
F. Failure/Malfunction Reporting
G. Severability
H. Duty to Comply
I. Need to Halt Reduce Activity Not a Defense
J. Permit Action for Cause
K. Property Rights
L. Duty to Submit Information
M. Duty to Pay Permit Fees
N. Fugitive Dust Emission Standards
O. Startup, Shutdown, and Malfunction
P. Alternative Operating Scenarios
Q. Inspection and Entry Requirements
R. Reopening for Cause
S. Permit Availability
T. Transfer of Permits
U. Malfunction as an Affirmative Defense
V. Permit Revocation or Termination For Cause

W. Duty to Supplement or Correct Application
X. Stratospheric Ozone Protection
Y. Accidental Release Prevention
Z. Changes to Permits for Emission Trading
AA. Emissions Trading

PERODIC MONITORING

The EPA periodic monitoring guidance, dated September 18, 1998, indicates on page 4 that periodic monitoring is required for each emission point at a source, subject to Title V of the Act, that is subject to an applicable requirement.

Most of the requirements applicable to they film plant already have sufficient periodic monitoring. The primary monitoring method is the recordkeeping, reporting, and testing requirements of conditions #9-11 of the 2001 permit. These conditions, through material balance calculation requirements and other recordkeeping provisions, serves to provide a reasonable assurance of compliance with conditions #3, #4, #5, #7, and #8 of the 2001 permit, as well as condition E.14. of the RACT agreement. Similarly, the material balance calculation, recordkeeping and reporting requirements of conditions E.3. and E.4. of the RACT agreement serve as periodic monitoring for the condition E.15. of the RACT agreement. This leaves only Condition #6 of the 2001 permit and condition E.13. of the RACT agreement to analyze for additional periodic monitoring. As these conditions both simply require the presence and proper operation of certain monitoring devices on the carbon beds, a monthly operational inspection of the continued proper functioning of the devices and control system is deemed to be sufficient periodic monitoring to provide a reasonable assurance of compliance.

INSIGNIFICANT EMISSION UNITS

The insignificant emission units are presumed to be in compliance with all requirements of the Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110. Insignificant emission units include the following:

No insignificant emission units were identified by the applicant.

CONFIDENTIAL INFORMATION

The permittee did not submit a request for confidentiality. All portions of the Title V application are suitable for public review.

PUBLIC PARTICIPATION

The draft permit went to public notice in the Richmond Times-Dispatch on October 2, 2001. The 30-day comment period specified in the public notice ran from October 3, 2001 until November 1, 2001. No comments were received.